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physical direction, toward a return zone defined within the physical operational zone.

- 10. The motorized shoe assembly of claim 9, wherein, in response to a detection of the motorized shoe assembly in the return zone, the processing device is configured to suspend the supply of power from the motor to suspend operation of the locomotion device.
- 11. The motorized shoe assembly of claim 1, further comprising a power supply device remotely coupled to the motor
 - 12. A method, comprising:

tracking a physical position of at least one motorized shoe in a physical environment;

detecting a distance between the at least one motorized shoe and a physical boundary of a physical operational zone defined in the physical environment;

comparing the detected distance to a threshold distance; actuating a locomotion device of the at least one motorized shoe in response to a detection of the at least one 20 motorized shoe within the threshold distance to the physical boundary of the physical operational zone when the detected distance is less than or equal to the threshold distance based on the comparison; and

moving the at least one motorized shoe into a physical ²⁵ return zone defined within the physical operational zone in response to actuation of the locomotion device to maintain a physical position of the at least one motorized shoe within the physical operational zone.

13. The method of claim 12, wherein the moving of the at least one motorized shoe into the physical return zone includes:

transmitting power generated by a motor to the locomotion device of the at least one motorized shoe via a power transmission device; and

rotating the locomotion device in a direction to convey the at least one motorized shoe toward the return zone.

14. The method of claim **12**, the method further comprising:

displaying, in a head mounted display device, a virtual environment; and

moving virtual elements of the virtual environment to correspond to tracked physical movement of the at least one motorized shoe in a first physical direction.

15. The method of claim 14, wherein the moving of the at least one motorized shoe into the return zone includes:

moving the at least one motorized shoe in a second physical direction that is different from the first physical direction; and

maintaining a virtual arrangement of the virtual elements of the virtual environment as the at least one motorized shoe moves in the second physical direction.

16. The method of claim **12**, wherein actuating the locomotion device includes:

supplying power from a motor to at least one wheel, of a plurality of wheels, of the locomotion device, to rotate the at least one wheel; and

moving a belt coupled to the plurality of wheels in response to the rotation of the at least one wheel, the movement of the belt being guided by the plurality of wheels.

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17. The method of claim 16, further comprising:

suspending the supply of power to the at least one wheel to suspend operation of the locomotion device when the detected distance is greater than the threshold distance based on the comparison.

18. The method of claim 16, wherein actuating the locomotion device includes:

supplying power from the motor to a first wheel of a first plurality of wheels on a first lateral side of a platform of the at least one motorized shoe to rotate the first wheel of the first plurality of wheels;

moving a first belt coupled to the first plurality of wheels in response to the rotation of the first wheel of the first plurality of wheels, the movement of the first belt being guided by the first plurality of wheels;

simultaneously supplying power from the motor to a first wheel of a second plurality of wheels on a second lateral side of the platform of the at least one motorized shoe to rotate the first wheel of the second plurality of wheels; and

simultaneously moving a second belt coupled to the second plurality of wheels in response to the rotation of the first wheel of the second plurality of wheels, the movement of the second belt being guided by the second plurality of wheels.

19. A motorized shoe assembly, including:

- a platform;
- a motor;
- a locomotion device coupled to the platform;
- a power transmission device coupling the motor and the locomotion device;
- a processing device operably coupling the motorized shoe assembly with an external computing device, the processing device including:
- a tracking device that is trackable by the external computing device for tracking a physical position of the motorized shoe assembly;
- a processor; and

a non-transitory computer-readable storage medium storing instructions that, when executed, cause the processor to:

detect a distance between the motorized shoe assembly and a physical boundary of a physical operational zone defined in a physical environment that is less than or equal to a threshold distance;

actuate the motor in response to the detection of the motorized shoe assembly within the threshold distance to the boundary of the operational zone; and

move the motorized shoe assembly in toward a physical return zone defined within the physical operational zone in response to actuation of the motor to maintain a position of the motorized shoe within the physical operational zone.

20. The motorized shoe assembly of claim 19, wherein instructions, when executed, also cause the processor to:

detect a distance between the motorized shoe assembly and the physical boundary of the physical operational zone that is greater than the threshold distance;

detect the motorized shoe assembly within the physical return zone; and

suspend operation of the motor in response to the detection of the motorized shoe assembly in response to the detection of the motorized shoe assembly within the physical return zone.

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